

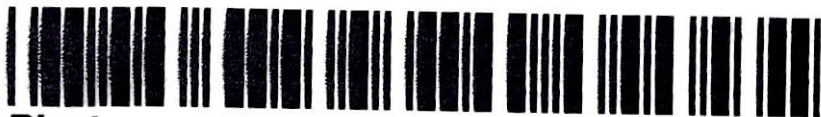
**DART**  
AEROSPACE  
**S017622**

**Dart Aerospace Ltd.**

1270 Aberdeen Street  
Hawkesbury, ON K64 1K7  
CANADA

TEL.: 1 613 632-5200

Email: [sales@dartaero.com](mailto:sales@dartaero.com)  
[www.dartaerospace.com](http://www.dartaerospace.com)



**Rivet**

**PART NO: D3950-1**

**Revision:**

**Operation: Purchasing**

**Change No:**

**Mfg Date: 12/05/17**

**Job No: 167951**



Dart Hawkesbury  
1270 Aberdeen St  
Hawkesbury, ON  
K6A 1K7  
Canada

Tel (613) 632-5200

**D3950-1**  
**Job Sheet 167951**



*So 17617*  
*11/8/17*

Part No: D3950-1

Job Qty: 500 ea

NOV 08 2017

Part Name: Rivet



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 11/8/17

Job Tracking No:

Due Date: 11/17/17

Created By: Diane Baker

Type: Stock

Description:

Ship Via:

### Bill of Materials

### Job Routing

| Op No | Operation  | Qty     | Start Date | Due Date | Standard  |         | Workcenter/Supplier   |              | Sign-off           |
|-------|------------|---------|------------|----------|-----------|---------|-----------------------|--------------|--------------------|
|       |            |         |            |          | Setup hrs | Run Hrs | Workcenter / Supplier | Lead Time    |                    |
| 100   | Purchasing | 500 pcs |            | 11/17/17 | 0.00      | 0.00    | Purchasing            |              | <i>SPR-125</i>     |
| 110   | Packaging  | 500 pcs |            | 11/17/17 | 0.00      | 0.00    | Packaging2            |              | <i>SPR-125</i>     |
| 120   | QC         | 500 pcs |            | 11/17/17 | 0.00      | 0.00    | QC6                   |              | <i>38</i>          |
| 130   | Packaging  | 500 pcs |            | 11/17/17 | 0.00      | 0.00    | Packaging3            | <i>57258</i> | <i>11</i>          |
| 140   | QC21-SA    | 500 Ea  |            | 11/17/17 | 0.00      | 0.00    | QC21                  |              | <i>DEC 08 2017</i> |

Part Op 110 - Receive & Inspect for Damage & Mat'l Certs  
Descriptions: 120 - QC6- All purchased or subcontracted products  
130 - Identify as per dwg & Stock Location: \_\_\_\_\_  
140 - QC21- Final Inspection - Work Order Release

*PO 038301*

*DAS 21 9-09*

*NOV 08 2017*

### Job Allocations

| Operation      | Component Part | Required | Inventory | Allocated | Std Qty |
|----------------|----------------|----------|-----------|-----------|---------|
| 100-Purchasing | PR-71          | 500      | 0         | 0         | 0       |

### Part Specifications

Specifications could not be found.

Plex 11/8/17 1:25 PM dart.baker.diane

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



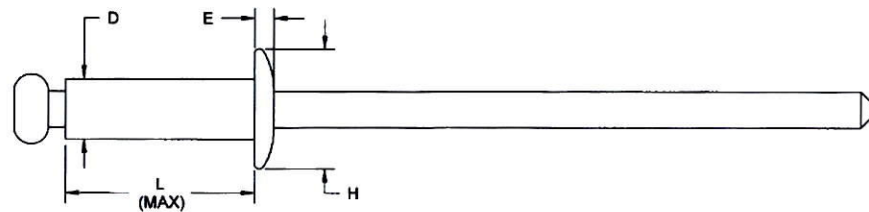
## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

|                                                              |                                                |                                                                                                                                                                                    |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |  |                       |                                                 |  |
|--------------------------------------------------------------|------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|--|-----------------------|-------------------------------------------------|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ |                                                | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> |                                                            | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/><br/>           Machining <input type="checkbox"/><br/>           Thermoforming <input type="checkbox"/><br/>           Large Fab <input type="checkbox"/> </div> <div>           Cross tube <input type="checkbox"/><br/>           Small Fab <input type="checkbox"/><br/>           Finishing <input type="checkbox"/><br/>           Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/><br/>           Prod. Eng. Coord. <input type="checkbox"/><br/>           Rec/Store/Packaging <input type="checkbox"/><br/>           Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/><br/>           Quality <input type="checkbox"/><br/>           Other <input type="checkbox"/> </div> </div> |                                               |  |                       |                                                 |  |
| Date :                                                       |                                                | Step #:                                                                                                                                                                            |                                                            | QTY Effective :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |  | MRB (QSI042) Approval |                                                 |  |
| Description Work Order Deviation                             |                                                |                                                                                                                                                                                    |                                                            | Disposition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                               |  |                       | Completed By                                    |  |
|                                                              |                                                |                                                                                                                                                                                    |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |  |                       | Lead hand / Supervisor<br>Approval Verification |  |
|                                                              |                                                |                                                                                                                                                                                    |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |  |                       | QC / QA Coordinator<br>Approval                 |  |
|                                                              |                                                |                                                                                                                                                                                    |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |  |                       |                                                 |  |
| Root Cause                                                   |                                                | FAULT CATEGORY                                                                                                                                                                     |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |  |                       |                                                 |  |
| Environment <input type="checkbox"/>                         | No Re-verification <input type="checkbox"/>    | Pressure/Forced <input type="checkbox"/>                                                                                                                                           | Temperature/Cure <input type="checkbox"/>                  | Power Loss/Surge <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Positioned Wrong <input type="checkbox"/>     |  |                       |                                                 |  |
| Design <input type="checkbox"/>                              | Operator <input type="checkbox"/>              | Bending <input type="checkbox"/>                                                                                                                                                   | Set-up <input type="checkbox"/>                            | Folio/Program <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Outside Dimensions <input type="checkbox"/>   |  |                       |                                                 |  |
| Doc/Data <input type="checkbox"/>                            | Offset/Setup <input type="checkbox"/>          | Centre Not Concentric <input type="checkbox"/>                                                                                                                                     | BOM/Route <input type="checkbox"/>                         | Grain <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Over/Under tolerance <input type="checkbox"/> |  |                       |                                                 |  |
| Equip/Tooling <input type="checkbox"/>                       | Supplier <input type="checkbox"/>              | Cracks <input type="checkbox"/>                                                                                                                                                    | Broken/Damage/Defect <input type="checkbox"/>              | Weld <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Part Incorrect <input type="checkbox"/>       |  |                       |                                                 |  |
| Handling/Pre <input type="checkbox"/>                        | Training <input type="checkbox"/>              | Crimp/Kink/Ripple/Wave <input type="checkbox"/>                                                                                                                                    | Inspection Incomplete/Unqualified <input type="checkbox"/> | Wrong Stock Pulled <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Part Lost/Missing <input type="checkbox"/>    |  |                       |                                                 |  |
| Material <input type="checkbox"/>                            | Use for Testing <input type="checkbox"/>       | Cuffs <input type="checkbox"/>                                                                                                                                                     | Contamination <input type="checkbox"/>                     | Out of Sequence <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Part Moved <input type="checkbox"/>           |  |                       |                                                 |  |
| Internal Transport <input type="checkbox"/>                  | Poor Information <input type="checkbox"/>      | Crushing <input type="checkbox"/>                                                                                                                                                  | Countersink <input type="checkbox"/>                       | Off-set <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Drawing <input type="checkbox"/>              |  |                       |                                                 |  |
| Tribal Knowledge <input type="checkbox"/>                    | Rushing <input type="checkbox"/>               | Heat Treat <input type="checkbox"/>                                                                                                                                                | Cut Too Short <input type="checkbox"/>                     | Mislabeled <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Finish <input type="checkbox"/>               |  |                       |                                                 |  |
| LOA <input type="checkbox"/>                                 | Product Improvement <input type="checkbox"/>   | Wave/Twist in Tube <input type="checkbox"/>                                                                                                                                        | Instructions Incomplete/Unclear <input type="checkbox"/>   | Fit/Function <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Misread <input type="checkbox"/>              |  |                       |                                                 |  |
| Substation <input type="checkbox"/>                          | Process Improvement <input type="checkbox"/>   | Marks/Chatter <input type="checkbox"/>                                                                                                                                             | Drill Holes <input type="checkbox"/>                       | Misaligned/off center <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Turning Sequence <input type="checkbox"/>     |  |                       |                                                 |  |
| Past Expiry Date <input type="checkbox"/>                    | Manufacturing Process <input type="checkbox"/> |                                                                                                                                                                                    |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |  |                       |                                                 |  |
| Misidentified <input type="checkbox"/>                       | Past Due <input type="checkbox"/>              | OTHER : _____                                                                                                                                                                      |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |  |                       |                                                 |  |

# SPECIFICATION CONTROL DRAWING



D3950-X RIVET

| DART PART NUMBER | DESCRIPTION                                                 | SUPPLIER  | SUPPLIER PART NUMBER | MANUFACTURER NUMBER | RIVET BODY DIAMETER "D" | HOLE SIZE AND DRILL NUMBER | GRIP RANGE    | LENGTH UNDER HEAD "L" | HEAD DIAMETER "H" | HEAD HEIGHT "E" |
|------------------|-------------------------------------------------------------|-----------|----------------------|---------------------|-------------------------|----------------------------|---------------|-----------------------|-------------------|-----------------|
| D3950-1          | RIVET - 5056 ALUMINUM BODY WITH COATED CARBON STEEL MANDREL | SPAENAUER | PR-71                | AD44BS              | 0.125                   | 0.129 - 0.133 #30          | 0.188 - 0.250 | 0.390                 | 0.250             | 0.040           |

**RELEASED**  
2009-08-28  
MP

- NOTES:**  
 1) MATERIAL: SEE TABLE  
 2) FINISH: N/A  
 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED  
 4) UNITS: INCHES UNLESS OTHERWISE NOTED  
 5) BREAK SHARP EDGES: N/A  
 6) IDENTIFICATION: N/A  
 7) WEIGHT: N/A

|            |             |    |          |
|------------|-------------|----|----------|
| A          | NEW ISSUE   | BY | 09.06.05 |
| REV.       | DESCRIPTION | BY | DATE     |
| DESIGN     |             |    |          |
| DRAWN      |             |    |          |
| CHECKED    |             |    |          |
| MFG. APPR. |             |    |          |
| APPROVED   |             |    |          |
| DE APPR.   |             |    |          |
| DATE       | 09.06.05    |    |          |

**DART AEROSPACE LTD**  
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. **D3950** REV. A  
 TITLE **RIVET** SCALE NTS

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HASKINS INDUSTRIAL INC.  
5-52 ANTARES DRIVE

\*\*\* BACK ORDER \*\*\*

Order # 1267407.00

NEPEAN, ONTARIO K2E 7Z1  
TEL (613)723-8800 FAX (613)723-8806

Order Date 11/09/17

Page 1 of 1

Sold To: DART AEROSPACE LTD.  
1270 ABERDEEN STREET  
HAWKESBURY  
ON  
K6A 1K7

Ship To: DART AEROSPACE LTD.  
1270 ABERDEEN STREET  
HAWKESBURY  
ON  
K6A 1K7

\* Reprint

|              |                        |                   |                                 |
|--------------|------------------------|-------------------|---------------------------------|
| Cust Phone # | Warehouse<br>NORTH BAY | F.O.B.<br>COLLECT | Taken By<br>Sylvie 613-723-8800 |
|--------------|------------------------|-------------------|---------------------------------|

|        |                |          |            |      |           |        |
|--------|----------------|----------|------------|------|-----------|--------|
| Cust # | Customer P/O # | Required | Orig Order | Slam | Ship Via  | Terms  |
| 05168  | 038301         | 11/10/17 | 1267407.00 | PL   | PUROLATOR | NET 30 |

| Ln# | Bin # | Order UM | Ship | B/O Product | Description |
|-----|-------|----------|------|-------------|-------------|
|-----|-------|----------|------|-------------|-------------|

1 500 EA 500 SPIX1  
PLEASE NOTE THE OLD PART NUMBER IS PR-71 HAS NOW  
BEEN CHANGED FROM SPAE NAUR  
Purolator acct # 7684382

310-A24-1X RIVET

SPACE L  
SPRIN ST  
RV

SPRIN 25

PLEASE NOTE:

1. NO RETURNS WITHOUT PRIOR AUTHORIZATION
2. ALL SHORTAGE CLAIMS MUST BE WITHIN 10 DAYS
3. BO CODE: BO = QTY NOT SHIPPED IS BACK-ORDERED  
CL= QTY NOT SHIPPED WAS CANCELLED  
SC= ITEM CONSIDERED COMPLETE - NO B/O CREATED

FILL PACK DATE 11/30/17  
Printed on 2017-11-30 at 9:54



Dart Hawkesbury  
1270 Aberdeen St  
Hawkesbury, ON  
K6A 1K7  
Canada

Tel (613) 632-5200

# PURCHASE ORDER PO038301

**Supplier:** HAS002-VC  
Haskins Industrial  
5-52 Antares Drive  
Nepean  
ON  
K2E 7Z1 Canada  
Phone: 613 723 8800  
Fax: 613 723 8806

**PO No:** PO038301  
**PO Date:** 11/8/17  
**Due Date:** 11/15/17  
**Purchase Order  
Revision:**  
**Revision Date:**  
**Ship-To Contact:** Phone:

**E-MAILED**  
NOV 08 2017

**Ship To:** 1270 Aberdeen Street  
Hawkesbury  
ON  
K6A 1K7 Canada  
Phone: 613-632-5200

**Via:** Ground  
**Pymt Terms:** Net 30  
**Freight Terms:**  
**Special Comments:**

## Items

| Line<br>Item | Part  | Rev | Description                         | Item Tax | Status | Due<br>Date | Order<br>Quantity | Received<br>Quantity | Balance | Unit<br>Price (CAD) | Extended<br>Price |
|--------------|-------|-----|-------------------------------------|----------|--------|-------------|-------------------|----------------------|---------|---------------------|-------------------|
| 1            | PR-71 | -   | Rivet<br>AS PER DWG D3950<br>REV. A |          | Firmed | 11/15/17    | 500 Ea            | 0 Ea                 | 500 Ea  | \$0.0294/Ea         | \$14.70           |

Line Item Note job# 167951

**Grand Total:** \$14.70

## Order Notes

Procurement Quality Clauses  
A005 RIGHT OF ENTRY  
A016 PERSONNEL QUALIFICATION  
A026 CERTIFICATION OF MATERIAL CONFORMANCE  
A032 PUBLIC LAW 101-592 FASTENER QUALITY ACT  
A033 STATEMENT OF CONFORMITY/TEST RECORDS FOR NAS, AN and MS FASTENERS  
A040 NOTIFICATION OF QUALITY ESCAPE  
A041 QUALITY MANAGEMENT SYSTEM  
A042 DART NOTIFICATION BY SUPPLIER  
A043 RETENTION OF QUALITY DOCUMENTS

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit [www.dartaerospace.com](http://www.dartaerospace.com) for further explanation.

Plex 11/8/17 1:59 PM dart.baker.diane